

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4790	heidenfelder.in. or beck.in.	US-PGPUB; USPAT	OR	OFF	2005/10/14 17:27
L2	12	I1 and benzoic.clm.	US-PGPUB; USPAT	OR	OFF	2005/10/14 17:27
L3	5	I2 and phthal\$.clm.	US-PGPUB; USPAT	OR	OFF	2005/10/14 17:28

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(FILE 'HOME' ENTERED AT 15:59:32 ON 14 OCT 2005)

FILE 'CASREACT' ENTERED AT 15:59:55 ON 14 OCT 2005

L1 STRUCTURE UPLOADED
L2 1 S L1 SSS
L3 14 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 16:00:32 ON 14 OCT 2005

=> s 13
L4 14 L3

=> d bib abs 1-14

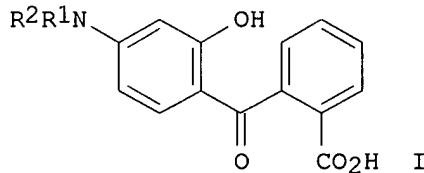
L4 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:665817 CAPLUS
DN **139:165858**
TI Synthesis of benzophenonecarboxylic acid derivatives useful for
thermochromic or pressure-sensitive dye intermediates
IN He, Bin
PA Maipu Chemicals Co., Ltd., Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1354168	A	20020619	CN 2000-127448	20001116
PRAI CN 2000-127448		20001116		
OS CASREACT 139:165858				
AB	The benzophenonecarboxylic acid derivs. are prepared by reacting m-aminophenol derivs. with phthalic anhydride. In one example 16.5 g m-(N,N-diethylamino)phenol was reacted with 19 g phthalic anhydride in 70 mL toluene and recrystd. in n-butanol to give a product with 83% yield.			

L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:356401 CAPLUS
DN **138:355192**
TI Production of aromatic keto acids for fluoran color formers for recording
materials
IN Campbell, Jonathan; Henshall, John Barry; Taylor, James Philip; Whitworth,
John
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003037846	A1	20030508	WO 2002-EP11647	20021017
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,			

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 CA 2463156 AA 20030508 CA 2002-2463156 20021017
 EP 1442009 A1 20040804 EP 2002-785236 20021017
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
 BR 2002013487 A 20041103 BR 2002-13487 20021017
 JP 2005507416 T2 20050317 JP 2003-540129 20021017
 US 2004242891 A1 20041202 US 2004-492467 20040413
 PRAI EP 2001-811051 A 20011026
 WO 2002-EP11647 W 20021017
 OS CASREACT 138:355192; MARPAT 138:355192
 GI



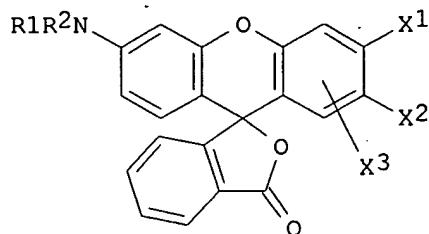
AB Aromatic keto acids (I; R1, R2 = H, optionally substituted C1-18-alkyl, C4-8-cycloalkyl, optionally substituted C4-8-cycloalkyl-C1-4-alkyl, optionally substituted Ph, C7-10-aralkyl, R1R2 together with N may form a heterocyclic group) are obtained by (A) heating phthalic anhydride and the appropriately substituted m-aminophenol in the absence of an organic solvent in a molar ratio of 0.5:1 to 10:1, (B) melting the mixture of step A at an elevated temperature, (C) choosing a reaction time in the range of 5 min to 40 h, (D) and separating the liquid phase from the solid phase; a solvent may be added after the reaction. The method is characterized by improved yields and reduced reaction times. I may be reacted with substituted phenols to produce fluoran color formers. In an example, 2-(dibutylamino)phenol was heated 4 h with phthalic anhydride at 90-95° to give 90% conversion to 4-(dibutylamino)-2-hydroxy-2'-carboxybenzophenone.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

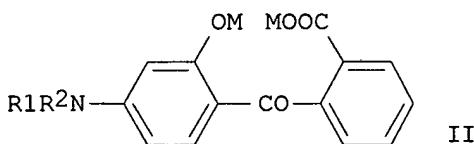
L4 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2002:464248 CAPLUS
 DN 137:48554
 TI High-yield preparation of aminofluoran color forming dyes for recording
 IN Kawai, Hajime; Uda, Yoshinori; Yano, Takashi
 PA Yamada Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002173607	A2	20020621	JP 2000-403983	20001206
PRAI JP 2000-403983		20001206		
OS CASREACT 137:48554; MARPAT 137:48554				

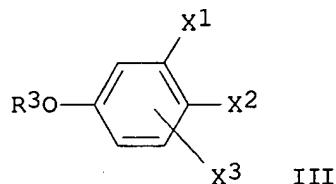
GI



I



II



III

AB The aminofluoran dyes I ($R_1, R_2 = \text{alkyl, cycloalkyl, alkoxyalkyl, tetrahydrofurfuryl, Ph}$; $X_1 = \text{H, alkyl}$; $X_2 = \text{H, alkyl, halo, NR}_4\text{R}_5$; $R_4, R_5 = \text{H, alkyl, aralkyl, Ph}$; $X_3 = \text{H}$), useful for thermog. and pressure-sensitive recording, etc., are prepared by treating benzophenonecarboxylic acid derivs. II ($R_1, R_2 = \text{same as above; M} = \text{Na, K}$) with phenols III ($R_3 = \text{H, alkyl}$; $X_1-3 = \text{same as above}$) in the presence of condensation agents. Thus, 4-(*N*-ethyl-*N*-iso-pentyl)amino-2-hydroxy-2'-carboxybenzophenone disodium salt was homogeneously dissolved in concentrated H_2SO_4 and reacted with 2-methyl-4-methoxydiphenylamine to give 2-anilino-3-methyl-6-(*N*-ethyl-*N*-iso-pentyl)aminofluoran with yield 89.4%.

L4 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:859692 CAPLUS

DN 136:311205

TI Synthesis of 2-(4-(dibutylamino)-2-hydroxybenzoyl)benzoic acid

AU Qi, Zhengjian; Zhou, Yuming; Cao, Ainian; Zhou, Qingnam

CS Jiangsu Province Research Institute of Chemical Industry, Nanjing, 210024, Peop. Rep. China

SO Nanjing Daxue Xuebao, Ziran Kexue (2001), 37(5), 643-648

CODEN: NCHPAZ; ISSN: 0469-5097

PB Nanjing Daxue

DT Journal

LA Chinese

OS CASREACT 136:311205

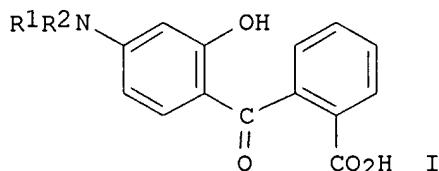
AB A synthetic method of 2-(4-*N,N*-dibutyl amino-2-hydroxybenzyl) benzoic acid was described. The intermediate product 2-(4-*N,N*-dibutyl amino) phenol was prepared by the reaction of 2-amino-phenol and Bu iodide in the presence of solvent and sodium carbonate at 1 atm and 90°C, and then was condensed with phthalic anhydride. The total yield is more than 78% and the content of the product is 99 %. The prepared product can react with diaryl amino or naphthylamino to form leuco multiaryl fluorane compds. containing lactone, which exhibit different colors, such as black, red, blue and green, by ring opening in the presence of phenols under heat and pressure. In this paper the infection facts on reaction of preparing 2-(4-*N,N*-dibutyl amino) phenol were discussed in detail, and the facts involve raw materials ratio, reaction time and temperature. And the best reaction condition has formed through homogeneous design experiment project with computer, i.e., 2-amino-pheno: n-tubyl iodide: sodium carbonate(mol-ratio) = 1:2.44:1.08; the best reaction time is 6 h and the best reaction temperature is (90±2)°. The yield of this reaction is 96.5%. The feasibility that different halides reacted to produce 2-(4-*N,N*-dibutyl amino) phenol under the normal pressure was discussed as well. The experiment results indicated that only n-tubyl iodide can

successfully react with 2-amino-phenol to successfully form 2-(4-N,N-dibutyl amino) phenol under the reflux temperature and normal pressure. Compared with the method based on Bu chloride although the price of raw material Bu iodide is more expensive, this prepared route avoids reacting under high pressure and temperature. It seems to be easier for industrialization in China. The homogeneous design project was also applied to producing 2-(4-N,N-dibutyl amino-2-hydroxybenzoyl) benzoic acid. The best reaction condition is 2-(4-N,N-dibutyl amino) phenol: Phthalic anhydride (Mol ratio) = 1:1.5; reaction temperature is 105-110°C; reaction period is 10-14 h. The purity of product is 99.8% and the yield is more than 80%.

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:133028 CAPLUS
DN 135:138690
TI Synthesis of 2-[4-(diethylamino)-2-hydroxybenzoyl]benzoic acid (KETO acid)
AU Wang, Yongcan; Song, Dongming; Cao, Yudong
CS State Key Lab. of Fine Chemicals, Dalian University of Technology, Dalian, 116012, Peop. Rep. China
SO Ranliao Gongye (2000), 37(5), 29-30, 15
CODEN: RAGOFS; ISSN: 1006-6632
PB Huagongbu Shenyang Huagong Yanjiuyuan
DT Journal
LA Chinese
OS CASREACT 135:138690
AB KETO acid (I) was prepared by the benzoylation of 3-diethylaminophenol with phthalic anhydride. The factors influencing the reaction were studied. Under optimal conditions, the yield of I was 81% and the purity 99.5%.

L4 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:134361 CAPLUS
DN 130:209504
TI Preparation of 2-[4'-(substituted amino)-2'-hydroxybenzoyl]benzoic acids
IN Shimizu, Yoji
PA Yamada Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11049736	A2	19990223	JP 1997-247447	19970807
PRAI JP 1997-247447		19970807		
OS CASREACT 130:209504; MARPAT 130:209504				
GI				

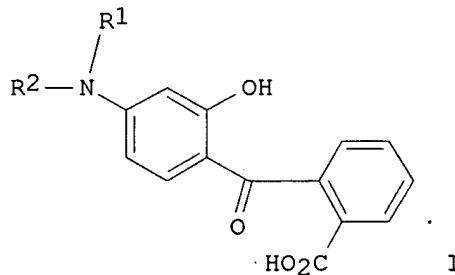


AB Title compds. I [R₁, R₂ = alkyl, cycloalkyl, alkoxyalkyl, benzyl, (substituted) Ph], useful as intermediates for fluorans developers for thermal recording materials, are prepared by reaction of m-R₁NR₂C₆H₄OH (R₁, R₂ = same as I) with phthalic anhydride in organic solvents or nonsolvent in the presence of R₃XNR₄R₅ [R₃ = H, (substituted) amino; X = alkylene; R₄, R₅ = alkyl, heteroalkyl; R₃, R₄, and/or R₅ may form ring] or

(R6)n-substituted pyridines [R6 = H, halo, (substituted) alkyl, (substituted) amino; n = 1-3] at 60-180°. 3-Diethylaminophenol (16.5 parts) was treated with 19.2 parts phthalic anhydride in the presence of pyridine in PhMe at 100° for 7 h to give 29.1 part 2-(4'-diethylamino-2'-hydroxybenzoyl)benzoic acid.

L4 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:473970 CAPLUS
DN 129:108902
TI Production of keto acids by reacting aminophenols with phthalic anhydride
IN Taylor, James Philip; Walker, William; Whitworth, John; Heneghan, Michael
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DT Patent
LA English
FAÑ.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 853079	A1	19980715	EP 1997-309184	19971114
	EP 853079	B1	20020605		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO ES 2176627	T3	20021201	ES 1997-309184	19971114
	CN 1197062	A	19981028	CN 1998-104211	19980108
	JP 10226672	A2	19980825	JP 1998-2693	19980109
	US 5925787	A	19990720	US 1998-5157	19980109
PRAI	GB 1997-376	A	19970109		
OS	CASREACT 129:108902; MARPAT 129:108902				
GI					



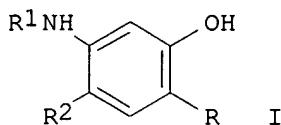
AB The present invention provides a method for the production of a keto acids (I; R1, R2 = straight or branched C1-18 chain alkyl, C4-8 cycloalkyl, or a Ph both of which may be substituted by at least one substituent selected from the group consisting of halogen atoms and C1-4 alkyl, C7-10 aralkyl) by reacting aminophenols m-HOC₆H₄NR₁R₂ (II; R₁, R₂ = same as above) with phthalic anhydride. Thus, II (R₁ = R₂ = n-Bu) was reacted with phthalic anhydride to give I (R₁, R₂ = same as above) with 90% conversion.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:38675 CAPLUS
DN 128:101907
TI Preparation of 2-(4-substituted-amino-2-hydroxybenzoyl)benzoic acids as intermediates for fluorans
IN Shimizu, Yoji
PA Yamada Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10007632	A2	19980113	JP 1996-196878	19960621
	GB 2314329	A1	19971224	GB 1997-12844	19970618
	GB 2314329	B2	20000531		
PRAI	JP 1996-196878	A	19960621		
OS	CASREACT 128:101907; MARPAT 128:101907				
GI					



AB The compds. I [R = COC₆H₄CO₂H-2; R₁ = alkyl, cycloalkyl, (p- or m-substituted) phenyl; R₂ = H, alkyl] (II), useful as intermediates for fluoran compds. for recording materials, are prepared by treatment of I (R = H) with phthalic anhydride (III) in the presence of absence of solvents at 130-180°. A mixture of 3-cyclohexylaminophenol, III, and o-C₆H₄Cl₂ was stirred at 150° for 2 h, and the reaction mixture was further treated with an aqueous NaOH solution at 100° for 1 h to decompose rhodamine dye to give 54.8% II (R₁ = cyclohexyl, R₂ = H). This was further treated with p-cresol to give 2-methyl-6-cyclohexylaminofluoran.

L4 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:831814 CAPLUS

DN 123:289569

TI Synthesis of fluoran dyes with improved properties

AU Meiqin, Shen; Yun, Shi; Qiyu, Tao

CS Dep. Applied Chem., Tianjin Univ., Tianjin, 300072, Peop. Rep. China

SO Dyes and Pigments (1995), 29(1), 45-55

CODEN: DYPIDX; ISSN: 0143-7208

PB Elsevier

DT Journal

LA English

OS CASREACT 123:289569

AB Three fluoran dyes having black, green and red colors, resp., were synthesized and their structures verified by IR spectra and elemental anal. Static and dynamic color development tests and thermal analyses proved that, with the addition of ester type sensitizers, the dyes can lower the temperature and accelerate the rate of color development and increase the optical d. of the developed color of thermal sensitive paper.

L4 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:740960 CAPLUS

DN 123:115340

TI Preparation of rhodamine derivatives as fluorescent labels

IN Corrie, John Edgar Thomas; Craik, James Stanley

PA Medical Research Council, UK

SO PCT Int. Appl., 31 pp.

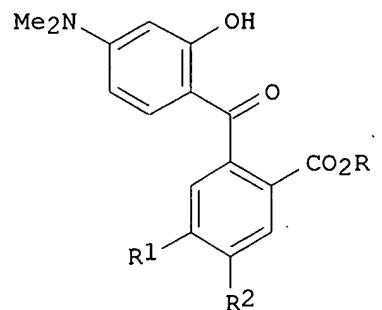
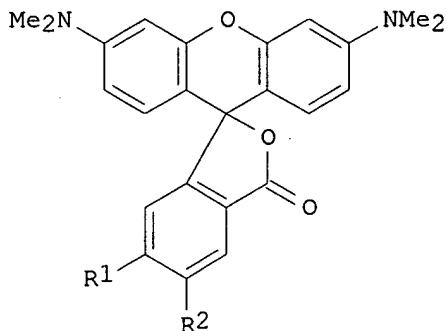
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9509170	A1	19950406	WO 1994-GB2073	19940923
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9476630	A1	19950418	AU 1994-76630	19940923
PRAI GB 1993-20019	A	19930928		
WO 1994-GB2073	W	19940923		
OS CASREACT 123:115340				
GI				



AB Title compds. (isomerically pure I; 1 of R1,R2 = H and the other = Br, NHCOCH₂X, NH₂, maleimido; X = Cl or iodo) were prepared. Thus, 4-nitrophthalic anhydride was condensed with 3-(HO)C₆H₄NMe₂ and the products esterified to give benzoylbenzoates II (R = Me, 1 of R1,R2 = H and the other = NO₂) which were separated by fractional crystallization and converted in 3 addnl. steps to II (R = H, 1 of R1,R2 = H and the other = NHAc). These were sep. cyclocondensed with 3-(HO)C₆H₄NMe₂ and the products converted in 3 addnl. steps to I (1 of R1,R2 = H and the other = NHCOCH₂I).

L4 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:435021 CAPLUS

DN 121:35021

TI Preparation of keto acid as intermediate for fluorane compounds

IN Sakamoto, Naoya; Ooyoshi, Hajime; Ito, Teruo

PA Mitsui Petrochemical Industries, Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

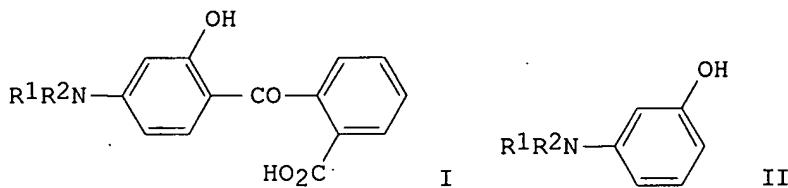
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06100512	A2	19940412	JP 1992-253308	19920922
JP 3181107	B2	20010703		
PRAI JP 1992-253308		19920922		
OS CASREACT 121:35021; MARPAT 121:35021				
GI				



AB Aminohydroxybenzophenonecarboxylic acid derivs. (I; R₁, R₂ = C₁-6 alkyl, C₄-8 cycloalkyl), useful as intermediates for fluoran compds. which in turn are used as dyes for pressure- and heat-sensitive recording, are prepared by reaction of m-aminophenol derivs. (II; R₁, R₂ = same as above) with phthalic anhydride in a water-soluble aliphatic lower carboxylic acid (preferably AcOH) and adding water or a mixed solvent of water and a water-soluble organic solvent (preferably MeOH) to the reaction liquid for crystallization

of keto acids. The keto acids are readily separated from the reaction mixture by crystallization in high yields. This process does not discharge any neutralization waste water. Thus, 1.75 g II (R₁ = Et, R₂ = isoamyl), 66.6 g phthalic anhydride, and 37.5 mL AcOH were reacted at 80° for 9 h under N and then cooled to 60° followed by adding 250 mL H₂O-MeOH (4/6 vol ratio), gradually cooling the resulting mixture from 60° for crystallization, centrifuging and filtration of precipitated crystals, and rinsing them with H₂O-MeOH (same vol ratio), and drying to give 72.1 g keto acid I (R₁ = Et, R₂ = isoamyl) of 98.9% purity.

L4 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1993:101655 CAPLUS

DN 118:101655

TI Preparation of oxo acids from aminophenols and phthalic anhydride.

IN Kondo, Masahiro; Tanaka, Michio; Sakamoto, Naoya; Ooyoshi, Hajime

PA Mitsui Petrochemical Industries, Ltd., Japan

SO Eur. Pat. Appl., 5 pp.

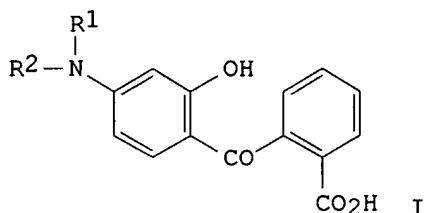
CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 511019	A2	19921028	EP 1992-303748	19920424
	EP 511019	A3	19930929		
	EP 511019	B1	19990623		
	R: CH, DE, FR, GB, IT, LI, NL				
	JP 06049008	A2	19940222	JP 1992-52889	19920311
	JP 3501816	B2	20040302		
	JP 11335339	A2	19991207	JP 1999-103554	19920311
	JP 3511480	B2	20040329		
	CA 2066976	AA	19921026	CA 1992-2066976	19920424
	CA 2066976	C	20030617		
	EP 858993	A1	19980819	EP 1998-106734	19920424
	EP 858993	B1	20030625		
	R: CH, DE, FR, GB, IT, LI, NL				
	KR 235808	B1	19991215	KR 1992-7015	19920425
PRAI	JP 1991-95901	A	19910425		
	JP 1992-52889	A	19920311		
	EP 1992-303748	A3	19920424		
OS	CASREACT 118:101655; MARPAT 118:101655				
GI					



AB Addition reaction between 3-R₁R₂NC₆H₄OH (R₁, R₂ = alkyl, cycloalkyl) and phthalic anhydride is carried out in a controlled amount of organic solvent to deposit the resulting oxo acid I while effecting the reaction in a slurry. E.g., 3-Et₂N-C₆H₄-OH was heated with phthalic anhydride in xylene for 7 h at 115° to give, after workup, 93.1% I [R₁ = R₂ = Et] with ≤ 0.1% of rhodamines formed.

L4 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1988:439406 CAPLUS

DN **109:39406**

TI Benzoic acid derivatives for color formers for heat- and pressure-sensitive recording

IN Yahagi, Masakichi; Igaki, Tetsuo; Yoshinaka, Shinji; Morita, Kosaku; Saito, Morikuni; Kinoshita, Masaaki

PA Shin Nisso Kako Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62294647	A2	19871222	JP 1987-123884	19870522
JP 02048538	B4	19901025		

PRAI JP 1987-123884 19870522

OS CASREACT 109:39406

AB The fluoran color former precursor 2-[4-(N-isobutyl-N-ethylamino)-2-hydroxybenzoyl]benzoic acid (I) was prepared. A mixture of m-(N-isobutyl-N-ethylamino)phenol and phthalic anhydride in Perclene was stirred under reflux for 5 h then with aqueous NaOH for 10 min, and the aqueous layer was washed with Perclene, acidified with HCl, and extracted with Perclene to give 66.4% I which was cyclocondensed with 4-ethoxy-2-methyldiphenylamine in concentrate H₂SO₄ for 48 h to give 68% (based on I) 3-(N-isobutyl-N-ethylamino)-6-methyl-7-phenylaminofluoran, reddish black with bisphenol A in heat-sensitive recording.

L4 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1987:103802 CAPLUS

DN **106:103802**

TI Shaping the absorption and fluorescence bands of a class of efficient, photoactive chromophores: synthesis and properties of some new 3H-xanthan-3-ones

AU Sauers, Ronald R.; Husain, Syeda N.; Piechowski, Allan P.; Bird, George R.

CS Dep. Chem., Rutgers, State Univ., New Brunswick, NJ, 08903, USA

SO Dyes and Pigments (1987), 8(1), 35-53

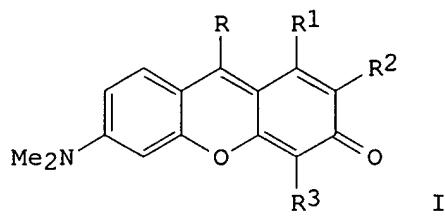
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AB An approach to the systematic design of absorption and fluorescence band shapes was developed from considerations of the solvatochromism and electronic perturbation of unsym. chromophores. The predicted spectral shifting and line broadening was demonstrated within a series of newly synthesized substituted 6-amino-3H-xanthen-3-ones (I; R = Me, Ph, C₆N₄CO₂H-*o*; R₁ = H, Me; R₂ = H, Me, Cl, CH₂CO₂H; R₃ = H, Me, Cl). A new method of presenting bandwidth data was developed which utilized dipole strength-weighted moments of absorption bands.

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